REMARKS

Reconsideration of this application is respectfully requested in view of the foregoing amendments and discussion presented herein.

1. Rejection of Claims 1-4 under 35 U.S.C. §102(b).

Claims 1-4 under 35 U.S.C. §102(b) as being anticipated by Gearey (U.S. Pat. 4,916,431).

Claim 1. Claim 1 is the independent claim within this group of claims. Amended Claim 1 recites the inclusion of "communicating sufficiently urgent levels of braking as a radio-frequency which includes position related data for qualifying said alert signal...".

Elements of Claim 1 are not recited in Gearey '431, wherein applicant respectfully requests that the rejection of Claim 1 and claims which depend therefrom be withdrawn.

2. Rejection of Claims 53-54 and 56-59 under 35 U.S.C. §102(b).

Claims 53-54 and 56-59 under 35 U.S.C. §102(b) as being anticipated by Beymer (U.S. Pat. 5,424,726).

Claim 50-54 and 56-59. These claims were canceled.

3. Rejection of Claim 5 under 35 U.S.C. §103(a).

Claims 5 under 35 U.S.C. §103(a) as being unpatentable over Geary in view of Yanagi (U.S. Pat. 6,278,360).

Claim 5. Amended Claim 5 is a dependent claim which depends upon Claim 1 which has been shown to be allowable. It will be recognized that Geary '431 does not disclose communicating a "radio-frequency alert signal" to following vehicles, and that Yanagi '360 does not disclose the detection of the urgency of braking as an alertive condition. Neither also disclose the inclusion of "position related data for qualifying said alert signal" as recited in Claim 1. Therefore, Claim 1 is not rendered obvious by the references, wherein Claim 5 should be *a fortiori* considered allowable.

Furthermore, Claim 5 also recites inclusion of "signal retransmission control data" within the alert signal for limiting dissemination of the alert signal, which is not found in either reference.

4. Rejection of Claim 6-10, 14, 23, 33 and 52 under 35 U.S.C. §103(a).

Claims 6-10, 14, 23, 33 and 52 under 35 U.S.C. §103(a) as being unpatentable over Beymer in view of Geary.

Claim 6. Claim 6 is the independent claim within this group of claims.

Beymer '726 describes the regeneration of a braking signal col. 4 lines 29-34. However, Beymer '726 in this instance as well as others, relies on the topology of the "chain" to control signaling between the vehicles. Specifically, he allows for unlimited regeneration of the signal, such that when a collection of cars exceeding a small group spaced apart by at least 1/8 mile are traveling along a roadway any small event causes the brake signal to be generated along the full span of the traffic, which could reach 20

or 30 miles in a congested metropolitan area. This problem with the basic design of Beymer '726 would prevent any practical application of the teachings. Additionally, no description is provided within Beymer '726 as to how the channels are allocated so that following vehicles are able to register even a few of the signals from up ahead, let alone the tsunami of responses generated from uncontrolled regeneration.

It will be noted that no mention of qualifying data is described as being sent within the data, such as the regeneration control recited in Applicant's Claim 6. For example, even "in the complex form", (col. 4, lines 11 - 24) no support exists for regeneration control data being included within the signal.

Claim 1. Although not addressed within this group of rejected claims, the amendments to Claim 1 are similarly constructed as amended Claim 6.

Beymer '726 teaches controlling the range of transmission by the preset level of transmission power (col. 5, lines 66-68), stated as "...and a low power output is chosen so that the effective transmitting distance is approximately six car lengths." Another section of text (col. 4, lines 29-33) states that: "If a following vehicle is within range of the emitter, the following unit may receive the signal, process it, and display and forward the signal with or without augmentation, depending on the conditions." Therefore, it will be recognized that the system of Beymer '726 broadcasts the signal to all vehicles within range.

In actual highway situations, however, there is rarely a fixed signal attenuation

from the first vehicle in the chain to a vehicle following a number of car lengths behind that vehicle. As a result the signal may be received by vehicles that are far removed from the "chain" described by Beymer which have an unobstructed line of sight to one of the vehicles generating the signal. Furthermore, signal reflections from vehicles or obstructions may be picked up by vehicles traveling nearby, or in the opposing direction, wherein their unit would register a false alarm indication.

In Beymer '726 any alert signal registered by a receiver is annunciated as an alert signal, whereas only the orientation of the RF transmitter and receiver restrict unwanted alerts (col. 5, lines 60 - 63). It will be noted that no mention of qualifying data is described as being sent within the data. For example, even "in the complex form", (col. 4, lines 11 - 24) no support exists for position information being included within the signal.

It should be appreciated that Applicant's Claim 1 includes a limitation wherein the "alert signal which includes position related data for qualifying said alert signal". This is an important aspect of the invention, in that alert transmissions created by Beymer '726 are subject to reflection from vehicle surfaces and roadway structures wherein vehicles traveling in any direction within the line of sight of the vehicle generating the alert are subject to annunciating the alert! This aspect of the invention is not taught in either reference and thereby not subject to the obviousness rejection.

Claims 7-10, 14, 23, 33 and 52. Claims 7-10, 14, 23, and 33 depend from Claim

6 which has been shown to be allowable, wherein these claims should be a fortiori considered allowable. Claim 52 was cancelled.

5. Rejection of Claim 28-32, 41 and 47-51 under 35 U.S.C. §103(a).

Claims 28-32, 41 and 47-51 under 35 U.S.C. §103(a) as being unpatentable over Beymer in view of Geary, and further in view of Yanagi.

Claim 28-32, 41 and 47-51. These are dependent claims stemming from Claim 6 which has been shown to be allowable, wherein these claims are also allowable being dependent therefrom.

6. Rejection of Claim 34, 37 and 38-40 under 35 U.S.C. §103(a).

Claims 34, 37 and 38-40 under 35 U.S.C. §103(a) as being unpatentable over Beymer in view of Geary, and further in view of Rahman (U.S. Pat. No. 6,121,896).

Claim 34, 37 and 38-40. These are dependent claims within the application stemming from Claim 6 which has been shown to be allowable, wherein these claims are also allowable being dependent therefrom.

The claims within this group include additional elements not described or available within the cited references. One important aspect of Applicant's invention is providing levels of severity for the alert signals. It will be readily understood that severity classification is not provided within the system of Beymer '726, and could not be readily implemented therein, as the signals sent provide a warning about braking, but there are no signaling mechanisms or signaling classifications for detecting or indicating severity of the situation such as that a "crash" has occurred, that emergency

vehicles are approaching, or a separate form of indication that provides warning about emergency blinkers being activated. As a result the vehicles do not know that the conditions are and what they are being alerted to.

As described at col. 6, lines 24 - 51 in Beymer '726, the panel indicator is described wherein panel lights are provided to indicate if the unit within a "chain" and which units ahead have applied their brakes with a light for each preceding unit in the chain. Applicant's invention does not describe the continuous sending of signals to determine whether a "chain" has been established, or provide a means for displaying same.

Applicant's invention, however, generates severity information which may be conveyed in a single alertive annunciation, such as sound or display, when conditions warrant. These alerts include alerts based on the amount and severity of hard braking along with being responsive to "crashes", "emergency vehicles or equipment", "emergency flashers" and so forth. The teachings of Beymer '726 do not include this severity information.

These limitations further indicate that these claims within Applicant's invention are not obvious in view of the cited references.

7. Rejection of Claim 42, 43, 46 and 55 under 35 U.S.C. §103(a).

Claims 42, 43, 46 and 55 under 35 U.S.C. §103(a) as being unpatentable over Beymer in view of Geary, and further in view of Donnelly et al. (U.S. Pat. No. 6,076,028).

Claim 42, 43, 46 and 55. These are dependent claims within the application depending from claim 6 which has been shown to be allowable, while Claim 43 has been cancelled.

Although some similar intensions are recited as Donnelly et al. Applicant's unit can collect information from vehicles about roadside accidents, as a no-cost adjunct to its primary function of preventing collisions on the roadway. A number of additional functions are provided by Applicant's invention which are not described within the related art.

Applicants invention is also directed at informing drivers of roadway conditions, alternate routes, and so forth, which is now recited in amended Claim 55. For example: "Events can be generated (HB7 events) from the call box by passing data to an event encoder 1530 which passes the encoded data to an output transmitter 1532 whose antenna 1534 projects the signal generally opposite to the direction of traffic flow." as described on page 101 lines 8 -13.

Furthermore, Applicant's invention also provides mechanisms for registering traffic conditions at the signaling box which are further recited in an additional independent claim and dependents.

As a consequence, support is lacking for an obviousness rejection on amended Claim 55 and the claims which depend therefrom, wherein Applicant respectfully requests that the rejection be withdrawn.

8. Amendment of Specification.

The Applicant has amended the specification to correct typographical errors discovered while preparing this response, and apologizes for any inconvenience which this may have caused the Examiner.

9. Amendment of Claims.

Claim 1. Amended to include directly recite the visual indicator, and describe aspects of the RF communication which includes position related data, such as provided from a compass sensor, and/or a GPS system providing position information.

Claim 6. Amended to include directly recite the visual indicator, and describe aspects of the RF communication which includes regeneration control data for limited dissemination of the alert signal.

Claim 55. Amended to include messages being communicated from the signaling box to vehicles passing nearby.

The dependent claims were amended to maintain proper dependence with the independent claims.

10. Addition of Claims 60 - 96.

Claim 60, 61. These depend from claim 1 and add limitation generally already found within other dependent claims relating to Claim 6.

Claim 62 and 63. These depend from Claim 55 drawn to a signaling box and describes the traffic condition sensors for registering the average speed and number of vehicles passing said signaling box. (See page 100 line 5 through page 111 line 8).

Claim 64-66. These describe a roadside signaling box for registering the traffic conditions using audio sound registration and signal processing in a similar manner as described in relation to Claim 55.

Claims 67 - 95. Comprise an independent claim having similar elements as claims 1 and 6 and the claims which depend therefrom.

Claim 96. An independent claim combining a number of elements from the above.

11. Additional Claim fees.

The application as originally filed included the payment for 59 total claims and 5 independent claims. A total of twenty-three additional claims have been added (37 - 14) with one additional independent claim. A fee of 23 * $9 = $207 + 42 = $249 has been included with the preliminary amendment.

12. Extension of Time Petition.

Included is a petition for a two month extension of time for this response to the Office Action as described in 37 CFR 1.136(a). An appropriate fee is enclosed of $200 for small entity.

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13. Conclusion.

The amendment modifies, and/or adds, a number of claims within the present application. Any changes to the specification are considered by the applicant to provide clarification while not adding new matter to the application. Each of these presently pending claims in this application are believed to be in immediate condition for allowance.

The Applicant respectfully requests a telephone interview with the Examiner to clarify any issues that arise upon examination on the merits of the present application, if an allowance of all claims does not appear forthcoming.

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Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES

IN THE SPECIFICATION:

The paragraphs within the specification has been amended as follows:

Paragraph at Page 32, Line 16:

An embodiment of the invention is shown in which a hard braking sensor 34 is attached to the brake pedal 18. Preferably the sensor 34 is attached to the front of the bare brake pedal and covered by a brake pedal cover 20, although it may be otherwise integrated or attached to the pedal. The hard braking sensor 34 contains a pressure transducer which senses applied pressure, preferably over a large surface area so that pressure applied anywhere on the pedal will be registered. The pressure transducer exemplified within this embodiment is a load cell whose output is generated across an internal Wien bridge. An acceleration sensor [is] may be optionally incorporated within the hard braking sensor (HBS) 34. The exemplified hard braking sensor 34 may be mounted to the brake pedal 18 by any of various means, such as by fasteners, adhesives, or physical configuration. The wiring 36 from the HBS can travel through a hole in the pedal face or alternately be threaded around the pedal. The HBS may alternatively be configured as a transponder wherein no wiring is required, however, the present current requirements of the HBS may complicate the implementation. The pedal cover 20 provides a resilient cushion for the brake pedal 18 and distributes localized forces onto the underlying sensor.

Paragraph at Page 58, Line 2:

"Related to the aforementioned speed input is an optional input from the acceleration pedal 175 which may be utilized to increase reaction advantage. It will be appreciated that a driver typically operates the brake and accelerator with the same foot, therefore, prior to a driver applying pressure to the brake pedal they must first release their foot from the accelerator pedal. The acceleration pedal sensor input to the hard braking controller 148 senses the amount of accelerator pedal depression, and is capable of registering changes in the amount of pedal depression. FIG. 41 and FIG. 42 depict an accelerator pedal sensing arrangement capable of registering the amount of pedal depression. An HBC equipped for monitoring the accelerator pedal can utilize the data to modify actions in relation to the other sensors. For example, if the driver is increasingly depressing the accelerator pedal then the severity of received event conditions may be elevated, since it is likely the driver has not perceived any such danger, by virtue of their increasing acceleration. By way of further example, the system can sense for an abrupt release of pressure, consistent with a driver removing his/her foot from the accelerator pedal to activate the brakes, wherein the HBC can generate an alert signal, such as by activating a hard braking light or transmission. It will be appreciated that the HBC may utilize the status of acceleration in a number of ways consistent with providing enhanced reaction advantage to the driver."

Paragraph at Page 60, Line 7:

"When utilized without an HBC, the acceleration sensor and conditioner of FIG. 41 and FIG. 42 may provide for a direct reaction advantage in a number of ways. First, [the] by sensing for an abrupt release of accelerator pedal pressure above a given speed, as registered by speed input 1834, the unit can slightly begin engaging the brakes. It can be presumed that at highway speeds, the driver will generally not abruptly yank their foot from the accelerator pedal unless they are attempting to engage the brakes. The system can start the process of engaging the brakes through a brake assist output 1836 which is capable of driving an activation device, such as solenoid 1838 connected to ground 1840. The system may also alert drivers behind the vehicle to the impending quick deceleration by activating a hard braking indicator, such as reverse lights, through the hard braking signal (HBS) line 1842. In the case of either HBC use, or use with other systems or as a standalone system, the sensing of accelerator pedal position can provide enhanced reaction advantages to the driver of a vehicle, as well as to those following said driver."

IN THE CLAIMS:

The claims have been amended as follows:

1. (amended) An anti-collision system for use within a motorized vehicle, comprising:

~~(a)~~ means for sensing the urgency with which the brakes of a first ~~said~~ vehicle are being activated and generating an alert signal in response thereto; ~~and~~

a visual indicator directed rearwardly of said first vehicle; and

~~(b)~~ means for rearwardly communicating sufficiently urgent levels of braking as a radio-frequency alert signal which includes position related data for qualifying said alert signal, said alert signal adapted for receipt by ~~to other drivers~~ anti-collision systems within vehicles following said first vehicle for providing advance warning to drivers for the avoidance of collisions ~~to said signal crossing a predetermined threshold~~.

4. (amended) An anti-collision system as recited in claim 1, wherein said ~~the means for rearwardly communicating urgent levels of braking to other drivers comprises~~ ~~a~~ visual indicator comprises a circuit adapted for activating the reverse lights of said vehicle in response to said alert signals and ~~which is capable~~ of being seen from behind said vehicle.

5. An anti-collision system as recited in claim 1, wherein ~~the~~ said means for rearwardly communicating sufficiently urgent levels of braking ~~to other drivers~~

comprises a remote communications link adapted for generating alert signals which include signal retransmission control data for limiting the dissemination of said alert signals~~, such as radio frequency, operably coupled to a visual indicator within the vehicles of the other drivers, upon which urgent levels of braking of said first vehicle are capable of being displayed~~.

6. (amended) An anti-collision system for communicating events from ~~reducing the probability of rear end vehicular collisions between~~ a first vehicle ~~and~~ to secondary vehicles following said first vehicle for increasing the available reaction time provided to the drivers of said secondary vehicles, comprising:

~~(a)~~ a sensor configured for attachment to the braking system of said first vehicle and configured to generate an alert signal in response to the ~~rapidity~~ urgency with which the brakes are applied by the driver of said first vehicle; ~~and~~

a visual indicator directed rearwardly from said first vehicle which is adapted to annunciate said alert signal;

~~(b)~~ a controller operably connected to ~~receive said signal from~~ said sensor and configured to remotely communicate said alert signal including signal regeneration data to activate an event indicator within a following vehicle whose anti-collision system is adapted for annunicating said signal and retransmitting said alert signal subject to the limitations specified by the signal regeneration data~~upon said signal crossing a predetermined threshold, said event indicator configured for recognition by drivers~~

~~within one or more of said following vehicles~~.

7. (amended) An anti-collision system as recited in claim 6, wherein the ~~rapidity~~ urgency of brake application is characterized by said sensor ~~in response~~ responding to changes in applied brake pedal pressure.

10. (amended) An anti-collision system as recited in claim 6, wherein the ~~rapidity~~ urgency of brake application is characterized by said sensor in response to brake pedal accelerations.

12. (amended) An anti-collision system as recited in claim 11, wherein said visual indicator~~the light source~~ is modulated on and off by said controller to increase recognition ~~by the~~ drivers ~~of the other vehicles~~.

13. (amended) An anti-collision system as recited in claim 11, wherein said visual indicator~~the event indicator~~ comprises the reverse lights of said first vehicle.

14. (amended) An anti-collision system as recited in claim 6, wherein said remote communication of said alert signal by said controller is ~~further~~ comprising a communications link operably connected with said controller~~,~~ through which the alert

event indicator located on another, second, vehicle is capable of being activated ~~by the transmission of an event signal by said controller through said communications link~~.

15. (amended) An anti-collision system as recited in claim 14, wherein the communications link is configured with a communications protocol in which a multiplicity of senders and signal regenerators~~receivers~~ are synchronized to the ~~order of~~ event ~~occurrence~~ being generated from a primary signal generator located the farthest forward within a group of vehicles.

16. (amended) An anti-collision system as recited in claim 14, wherein said communications ~~link~~protocol comprises a multiplicity of time slots selected for event signal transmission by said controllers within anti-collision system of additional vehicles proximal to said first vehicle~~a transmitter operably connected to said controller and capable of generating an event signal to remotely activate an event indicator contained within vehicles following said first vehicle~~.

17. (amended) An anti-collision system as recited in claim 16, wherein said event signal transmissions are ~~the transmitter is~~ oriented substantially for rearward projection from said first vehicle such that the associated event signal generated by said first vehicle is directed for reception by vehicles following said first vehicle.

18. (amended) An anti-collision system as recited in claim 16, wherein the controller is configured to provide event signal communication of a single event as periodic transmissions within a selected time slot wherein ~~short-term short-term~~ signal interference with alert signals generated from other of said anti-collision systems is prevented.

21. (amended) An anti-collision system as recited in claim 6~~14~~, wherein said controller is configured to encode multiple levels of severity data within the event signal.

22. (amended) An anti-collision system as recited in claim 6~~14~~, wherein said controller is configured to encode identification data allowing event signals generated from different vehicles to be distinguished from one another.

25. (amended) An anti-collision system as recited in claim 6:~~24,~~

wherein ~~the selective~~ event signal regeneration is controlled by the transmission of a regeneration limiter value encoded within the transmitted event signal that limits the number of consecutive times that said alert signal may be retransmitted by a controller not associated with the vehicle originally registering the event;

wherein said limitation on consecutive number of retransmissions depends on which of multiple severity levels the alert signal belongs.

26. (amended) An anti-collision system as recited in claim 25, wherein ~~the~~ said regeneration limiter value comprises ~~is controlled by~~ a count value encoded into the event signal ~~as the regeneration limiter, said count value~~ and set to a first value upon first transmission from said first vehicle and which is subsequently altered by additional anti-collision systems responsive to said first transmission within ~~an~~ additional vehicles, wherein these system are~~is~~ configured to further regenerate the signal until the count value reaches a final value whereupon receipt of the event signal with the final count value prevents further event signal regeneration.

28. (amended) An anti-collision system as recited in claim 6~~14~~, further comprising a crash detection sensor operably connected to said controller and configured to generate a crash event signal in response to detection of a crash.

31. (amended) An anti-collision system as recited in claim 6~~14~~, further comprising a swerve sensor operably connected to said controller, said swerve sensor generating a swerve signal which is capable of initiating event signal generation by said controller in response to a sufficient amount of detected swerve and of conditioning the response of the controller.

32. (amended) An anti-collision system as recited in claim 6~~14~~, further comprising a direction sensor operably connected to said controller ~~such that~~ and a

direction of travel for said first vehicle ~~may be~~ is encoded within event signals being communicated.

33. (amended) An anti-collision system as recited in claim 6~~14~~, wherein the event indicator located in said ~~the~~ secondary vehicles is adapted to provide~~s~~ a visual indication of said alert signal which is visible to the drivers of said secondary vehicles~~, such as a visual indication on the dashboard~~.

34. (amended) An anti-collision system as recited in claim 6~~14~~, wherein the event indicator located in ~~the~~ said secondary vehicles is adapted to provide~~s~~ an audio alert to the drivers of said secondary vehicles.

35. (amended) An anti-collision system as recited in claim 6~~14~~, wherein said~~the~~ event indicator located in the second vehicle is responsive to the severity level encoded within said~~the~~ event signal wherein~~such that~~ feedback as to the importance of the alert may be provided to the drivers of said secondary vehicles~~ by the event indicator whereupon the driver is alerted to the severity of the event which has taken place~~.

36. (amended) An anti-collision system as recited in claim 6~~14~~, wherein the event indicator is configured for indicating roadway condition messages which are received as event signals from roadside devices and emergency vehicles equipped to generate roadway condition event signals.

39. (amended) An anti-collision system as recited in claim 6~~14~~, further comprising a speed sensor connected to the said controller, wherein event signal generation is fully or partially responsive to the output of the speed sensor, such that braking activity which occurs within slow moving vehicles, as in parking lots adjacent to a roadway, does not unnecessarily alert drivers on the roadway.

40. (amended) An anti-collision system as recited in claim 6~~14~~, further comprising a GPS positioning system connected to said controller for enhancing event qualification by embedding position data within the transmitted event signals and for qualifying received event signals by comparing the position of the vehicle issuing the event with the vehicle within which the event signal has been received.

41. (amended) An anti-collision system as recited in claim 6~~14~~, further comprising a range detection device operably connected to said controller and capable of determining the distance to the vehicle being followed such that the controller may detect impending crash situations and respond to events in a manner consistent with the amount of following distance that exists.

42. (amended) An anti-collision system as recited in claim 6~~14~~, wherein the communication link is configured for transmitting event signals which are capable of

being received within a properly configured call box unit, or similarly configured receiver, that is configured to receive event signals and communicate significant event information over a communication channel to personnel, such as may be dispatched to the scene.

44. (amended) An anti-collision system as recited in claim 6~~14~~, wherein upon receipt of an event signal over the communications link the controller is capable of generating a signal to the cruise control for releasing the pressure on the accelerator pedal, so that the car can begin to decelerate immediately upon receipt of the event signal.

45. (amended) An anti-collision system as recited in claim 6~~14~~, further comprising an error detection circuit which monitors the operation of said controller and is capable of shutting down portions, or the entire, circuit of the controller in response to detected errors.

46. (amended) An anti-collision system as recited in claim 45, wherein the error detection unit connected to said controller is adapted for receiving additional ~~further comprises~~ status inputs on vehicle conditions and storing event signal information along with status inputs within digital memory for later recall~~within which vehicle status information is logged until such time as the vehicle containing said controller is involved~~

~~in a crash, whereupon the data which has been logged may be accessed to determine vehicle conditions prior to the crash~~.

47. (amended) An anti-collision system as recited in claim 6~~14~~, further comprising an automatic mute circuit connected to said controller and capable of muting the audio output of the sound system of said vehicle in response to the controller receiving an event signal of sufficient severity, wherein~~such that~~ the driver can be alerted to approaching emergency vehicles which are generating an event signal, ~~and~~ as well as to severe roadway conditions requiring the driver's full attention.

48. (amended) An anti-collision system as recited in claim 6~~14~~, further comprising an automatic braking mechanism connected to said controller which is capable of activating the vehicle's brakes, wherein said controller is configured for activating the automatic braking mechanism detecting a sufficient alert condition.

49. (amended) An anti-collision system as recited in claim 6, further comprising an accelerator pedal sense input to said controller, wherein said controller is capable of discerning the level of acceleration to which the vehicle is subject, and can additionally discern changes to acceleration, ~~such as an~~ and abrupt releases of the accelerator pedal pressure which may be indicative of a process of hard braking, said controller being configured for conditioning outputs, such as hard braking indicators,

communication links, and mechanisms for automatically engaging the brakes in response thereto.

55. (amended) In a roadside signaling~~call~~ box which is capable of providing communication between its roadway location and a centralized location~~emergency personnel~~, wherein the improvement comprises:

~~(a)~~ a receiver capable of registering event signals generated by the transmitters within vehicles that are experiencing or responding to roadway events;

~~(b)~~ a control circuit operatively connected to said receiver, wherein the control circuit is adapted for ~~capable of~~ activating an appropriate outcall to emergency personnel when the registered event signal is of sufficient severity; and

~~(c)~~ an encoder adapted for ~~capable of~~ converting the information about the received event signals into a signal compatible with the ~~out~~call circuitry of the signaling~~call~~ box, including ~~such as a~~ voice signals and data signals, wherein ~~so that the~~ event signal information is communicated to said central location~~emergency personnel~~ that may then respond appropriately~~to the roadside events which have been registered~~;~~.

a decoder adapted for receiving messages over said call circuitry which are to be disseminated to drivers; and

a transmitter adapted for generating alert signals containing said messages for receipt within nearby stationary or passing vehicles.